

# 27457

PTO-1590 (1-2000)

09/258947

FILE 'REGISTRY' ENTERED AT 11:07:21 ON 03 MAY 2000

L1 119 S WNWRYREYV | WR..EY/SQSP

FILE 'CAPLUS' ENTERED AT 11:08:02 ON 03 MAY 2000

L2 110 S L1

L3 4 S L2 AND ?MIMOTOP?

L3 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1999:147365 CAPLUS

DOCUMENT NUMBER: 130:205126

TITLE: **Mimotopes** and anti-**mimotopes**  
of human platelet glycoprotein Ib/IX

INVENTOR(S): Miller, Jonathan L.; Lyle, Vicki A.

PATENT ASSIGNEE(S): The Research Foundation of State University of  
New York, USASOURCE: U.S., 52 pp., Cont.-in-part of U.S. Ser. No.  
406,330.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5877155	A	19990302	US 1995-556597	19951113
US 5817748	A	19981006	US 1995-406330	19950317
WO 9718236	A1	19970522	WO 1996-US17882	19961108
W: CA, CN, JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 876396	A1	19981111	EP 1996-942734	19961108
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CN 1202175	A	19981216	CN 1996-198270	19961108
PRIORITY APPLN. INFO.:				
				US 1995-406330 19950317
				US 1995-556597 19951113
				WO 1996-US17882 19961108

AB The invention is directed to an isolated peptide that functionally mimics a binding site for a monoclonal antibody, the monoclonal antibody recognizing an epitope within the human platelet glycoprotein Ib/IX complex. This peptide is called a **mimotope**. The invention also provides an isolated mol. capable of binding to the peptide, or the **mimotope**, which mol. can be an antibody, a second peptide, a carbohydrate, a DNA mol., an RNA mol., or other naturally or chem. synthesized mols. This isolated mol. is called an anti-**mimotope**.

**Mimotopes** mimicking the binding site for monoclonal antibody C-34 and SZ-2, as well as anti-**mimotopes** to the C-34

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**mimotopes**, are specifically provided. The anti-**mimotopes** could serve as antithrombotic drugs.

IT 220972-76-9

RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)

(**mimotopes** and anti-**mimotopes** of human platelet glycoprotein Ib/IX)

IT 176546-79-5

RL: BAC (Biological activity or effector, except adverse); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(**mimotopes** and anti-**mimotopes** of human platelet glycoprotein Ib/IX)

IT 176546-78-4 190831-44-8 190831-46-0

190831-48-2 190831-51-7 190831-56-2

RL: PRP (Properties)

(**mimotopes** and anti-**mimotopes** of human platelet glycoprotein Ib/IX)

L3 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1998:650060 CAPLUS

DOCUMENT NUMBER: 129:274689

TITLE: **Mimotopes** and anti-**mimotopes** of human platelet glycoprotein Ib/IX

INVENTOR(S): Miller, Jonathan L.; Lyle, Vicki A.

PATENT ASSIGNEE(S): The Research Foundation of State University of New York, USA

SOURCE: U.S., 26 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5817748	A	19981006	US 1995-406330	19950317
US 5877155	A	19990302	US 1995-556597	19951113
PRIORITY APPLN. INFO.:			US 1995-406330	19950317

AB The present invention is directed to an isolated peptide that functionally mimics a binding site for a monoclonal antibody, the monoclonal antibody recognizing an epitope within the human glycoprotein Ib/IX complex. This peptide is called a **mimotope**. The invention also provides an isolated mol. capable of binding to the peptide, or the **mimotope**; which mol. can be an antibody, a second peptide, a carbohydrate, a DNA mol., an RNA mol., or other naturally or chem. synthesized mols. This isolated mol. is called an anti-**mimotope**.

**Mimotopes** mimicking the binding site for monoclonal antibody

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C-34 are specifically provided.

IT 176546-78-4 176546-79-5 190831-44-8  
190831-46-0 190831-48-2 190831-51-7  
190831-56-2

RL: BPR (Biological process); PRP (Properties); BIOL (Biological study); PROC (Process)

(**mimotopes** and anti-**mimotopes** of human platelet glycoprotein Ib/IX)

L3 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1997:416926 CAPLUS

DOCUMENT NUMBER: 127:32826

TITLE: **Mimotopes** and anti-**mimotopes**  
of human platelet glycoprotein Ib/IX

INVENTOR(S): Miller, Jonathan L.; Lyle, Vicki A.

PATENT ASSIGNEE(S): Research Foundation of State University of New York, USA

SOURCE: PCT Int. Appl., 116 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9718236	A1	19970522	WO 1996-US17882	19961108
W: CA, CN, JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5877155	A	19990302	US 1995-556597	19951113
EP 876396	A1	19981111	EP 1996-942734	19961108
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.:  
US 1995-556597 19951113  
US 1995-406330 19950317  
WO 1996-US17882 19961108

AB The present invention is directed to an isolated peptide that functionally mimics a binding site for a monoclonal antibody, the monoclonal antibody recognizing an epitope within the human platelet glycoprotein Ib/IX complex. This peptide is called a **mimotope**. The invention also provides an isolated mol. capable of binding to the peptide, or the **mimotope**, which mol. can be an antibody, a second peptide, a carbohydrate, a DNA mol., an RNA mol., or other naturally or chem. synthesized mols. This isolated mol. is called an anti-**mimotope**.

**Mimotopes** mimicking the binding site for monoclonal antibody C-34 and SZ-2, as well as anti-**mimotopes** to the C-34

**mimotopes**, are specifically provided. These peptides are

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useful for modulating adhesion, aggregation, or agglutination of platelets.

IT 176546-78-4 176546-79-5 190831-44-8  
190831-46-0 190831-48-2 190831-51-7  
190831-56-2

RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(mimotopes and anti-mimotopes of human platelet glycoprotein Ib/IX)

L3 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1996:241172 CAPLUS

DOCUMENT NUMBER: 124:338977

TITLE: **Mimotope/anti-mimotope**  
probing of structural relationships in platelet glycoprotein Ib.alpha.

AUTHOR(S): Miller, Jonathan L.; Lyle, Vicki A.

CORPORATE SOURCE: Department Pathology, State University New York Health Science Center, Syracuse, NY, 13210, USA  
SOURCE: Proc. Natl. Acad. Sci. U. S. A. (1996), 93(8), 3565-9

CODEN: PNASA6; ISSN: 0027-8424

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A bacteriophage library displaying random decapeptides was used to characterize the binding preference of C-34, a monoclonal antibody originally raised against platelet-type von Willebrand disease platelets heterozygous for the mutation 230WKQ(G.fwdarw.V)233V234 in the .alpha. chain of glycoprotein Ib (GPIb.alpha.). Three rounds of biopanning C-34 against the library resulted in striking convergence upon the sequence WNWRYREYV. Since no portion of this sequence corresponds to a recognizable peptide sequence within human platelet GPIb.alpha., it may be considered a "mimotope" of the naturally occurring C-34 epitope, presumably bearing similarity to it in three-dimensional structure. Synthetic AWWRYREYV peptide preincubated with C-34 fully neutralized the ability of C-34 to inhibit platelet aggregation, with an IC50 of .apprxeq.6 .mu.g/mL. When biotinylated AWWRYREYV was subsequently biopanned against the original decapeptide library, the sole clone demonstrating inhibitory activity above background level in a functional platelet assay displayed the sequence RHVAWWRQGV, and chem. synthesized peptide fully inhibited ristocetin-induced aggregation, with an IC50 of 200-400 .mu.g/mL. Synthesized RHVAWWKQGV peptide exerted only slight inhibition, whereas RHVAWWKQVV peptide showed potent inhibitory activity. Moreover, whereas synthesized wild-type 228YVWKQGV237 GPIb.alpha. peptide was virtually without inhibitory activity, the 228YVWKQ(G.fwdarw.V)233VDVK237 peptide fully inhibited ristocetin-induced aggregation, with an IC50 of .apprxeq.400 .mu.g/mL. These studies raise the possibility of an

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intramol. assocn. of peptide regions within GPIb.alpha. that may play a role in the regulation of von Willebrand factor-dependent platelet aggregation.

IT 176546-78-4 176546-79-5

RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)

(mimotope/anti-mimotope probing of structural relationships in platelet glycoprotein Ib.alpha.)

E3 THROUGH E10 ASSIGNED

=> fil reg

FILE 'REGISTRY' ENTERED AT 11:09:35 ON 03 MAY 2000

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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STRUCTURE FILE UPDATES: 2 MAY 2000 HIGHEST RN 263572-43-6

DICTIONARY FILE UPDATES: 2 MAY 2000 HIGHEST RN 263572-43-6

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 11, 2000

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Structure search limits have been increased. See HELP SLIMIT for details.

=> s e3-e10

1 176546-78-4/BI  
(176546-78-4/RN)

1 176546-79-5/BI  
(176546-79-5/RN)

1 190831-44-8/BI  
(190831-44-8/RN)

1 190831-46-0/BI  
(190831-46-0/RN)

1 190831-48-2/BI  
(190831-48-2/RN)

1 190831-51-7/BI  
(190831-51-7/RN)

1 190831-56-2/BI  
(190831-56-2/RN)

1 220972-76-9/BI  
(220972-76-9/RN)

L4 8 (176546-78-4/BI OR 176546-79-5/BI OR 190831-44-8/BI OR  
190831-46-0/BI OR 190831-48-2/BI OR 190831-51-7/BI OR

Searcher : Shears 308-4994

09/258947

190831-56-2/BI OR 220972-76-9/BI)

=> s 14 and 11

L5 8 L4 AND L1

=> d 1-8 .bevreg1

L5 ANSWER 1 OF 8 REGISTRY COPYRIGHT 2000 ACS

RN 220972-76-9 REGISTRY

CN L-Valine, N-[6-[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]-1-oxohexyl]-L-alanyl-L-tryptophyl-L-asparaginyL-L-tryptophyl-L-arginyl-L-tyrosyl-L-arginyl-L-.alpha.-glutamyl-L-tyrosyl- (9CI) (CA INDEX NAME)

SQL 11

SEQ 1 XAWNWRVREY V

=====

HITS AT: 3-11

REFERENCE 1: 130:205126

L5 ANSWER 2 OF 8 REGISTRY COPYRIGHT 2000 ACS

RN 190831-56-2 REGISTRY

CN L-Tyrosine, glycyl-L-tyrosyl-L-histidyl-L-tryptophyl-L-tryptophyl-L-arginyl-L-asparaginyL-L-tryptophyl-L-.alpha.-glutamyl- (9CI) (CA INDEX NAME)

SQL 10

SEQ 1 GYHWWRNWEY

=====

HITS AT: 5-10

REFERENCE 1: 130:205126

REFERENCE 2: 129:274689

REFERENCE 3: 127:32826

L5 ANSWER 3 OF 8 REGISTRY COPYRIGHT 2000 ACS

RN 190831-51-7 REGISTRY

CN L-Valine, L-tryptophyl-L-arginyl-L-glutaminyl-L-arginyl-L-.alpha.-glutamyl-L-tyrosyl-L-tryptophyl-L-.alpha.-aspartyl-L-prolyl- (9CI) (CA INDEX NAME)

SQL 10

SEQ 1 WRQREYWDPV

=====

HITS AT: 1-6

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REFERENCE 1: 130:205126

REFERENCE 2: 129:274689

REFERENCE 3: 127:32826

L5 ANSWER 4 OF 8 REGISTRY COPYRIGHT 2000 ACS

RN 190831-48-2 REGISTRY

CN L-Leucine, L-threonyl-L-glutaminyl-L-methionyl-L-tryptophyl-L-arginyl-L-alanyl-L-arginyl-L-.alpha.-glutamyl-L-tyrosyl- (9CI) (CA INDEX NAME)

SQL 10

SEQ 1 TQMWRAREYL

=====

HITS AT: 4-9

REFERENCE 1: 130:205126

REFERENCE 2: 129:274689

REFERENCE 3: 127:32826

L5 ANSWER 5 OF 8 REGISTRY COPYRIGHT 2000 ACS

RN 190831-46-0 REGISTRY

CN L-Valine, L-tyrosyl-L-leucylglycyl-L-tryptophyl-L-arginyl-L-tyrosyl-L-seryl-L-.alpha.-glutamyl-L-tyrosyl- (9CI) (CA INDEX NAME)

SQL 10

SEQ 1 YLGWRYSEYV

=====

HITS AT: 4-9

REFERENCE 1: 130:205126

REFERENCE 2: 129:274689

REFERENCE 3: 127:32826

L5 ANSWER 6 OF 8 REGISTRY COPYRIGHT 2000 ACS

RN 190831-44-8 REGISTRY

CN L-Valine, L-leucyl-L-seryl-L-threonyl-L-tryptophyl-L-arginyl-L-tyrosyl-L-phenylalanyl-L-.alpha.-glutamyl-L-tyrosyl- (9CI) (CA INDEX NAME)

SQL 10

SEQ 1 LSTWRYFEYV

=====

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HITS AT: 4-9

REFERENCE 1: 130:205126

REFERENCE 2: 129:274689

REFERENCE 3: 127:32826

L5 ANSWER 7 OF 8 REGISTRY COPYRIGHT 2000 ACS

RN 176546-79-5 REGISTRY

CN L-Valine, L-alanyl-L-tryptophyl-L-asparaginyl-L-tryptophyl-L-arginyl-L-tyrosyl-L-arginyl-L-.alpha.-glutamyl-L-tyrosyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN L-Valine, N-[N-[N-[N2-[N-[N2-[N-[N2-(N-L-alanyl-L-tryptophyl)-L-asparaginyl]-L-tryptophyl]-L-arginyl]-L-tyrosyl]-L-arginyl]-L-.alpha.-glutamyl]-L-tyrosyl]-

SQL 10

SEQ 1 AWWRYREYV

=====

HITS AT: 2-10

REFERENCE 1: 130:205126

REFERENCE 2: 129:274689

REFERENCE 3: 127:32826

REFERENCE 4: 124:338977

L5 ANSWER 8 OF 8 REGISTRY COPYRIGHT 2000 ACS

RN 176546-78-4 REGISTRY

CN L-Valine, L-tryptophyl-L-asparaginyl-L-tryptophyl-L-arginyl-L-tyrosyl-L-arginyl-L-.alpha.-glutamyl-L-tyrosyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN L-Valine, N-[N-[N-[N2-[N-[N2-[N-(N2-L-tryptophyl-L-asparaginyl)-L-tryptophyl]-L-arginyl]-L-tyrosyl]-L-arginyl]-L-.alpha.-glutamyl]-L-tyrosyl]-

SQL 9

SEQ 1 WNWRYREYV

=====

HITS AT: 1-9

REFERENCE 1: 130:205126

REFERENCE 2: 129:274689

Searcher : Shears 308-4994

09/258947

REFERENCE 3: 127:32826

REFERENCE 4: 124:338977

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'HOME' ENTERED AT 11:09:55 ON 03 MAY 2000

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